**Pseudo Code**

CLASS Calculation

MAIN

No Algorithm

SUBMODULE add

IMPORT: r1 (RealNumber), r2 (RealNumber)

EXPORT: None

ALGORITHM:

Construct oldr1 using r1

r1.add🡨r2

OUTPUT oldr1.toString, “ + “, r2.toString, “ = “, r1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

SUBMODULE subtract

IMPORT: r1 (RealNumber), r2 (RealNumber)

EXPORT: None

ALGORITHM:

Construct oldr1 using r1

r1.subtract🡨r2

OUTPUT oldr1.toString, “ - “, r2.toString, “ = “, r1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

SUBMODULE multiply

IMPORT: r1 (RealNumber), r2 (RealNumber)

EXPORT: None

ALGORITHM:

Construct oldr1 using r1

r1.multiply🡨r2

OUTPUT oldr1.toString, “ x “, r2.toString, “ = “, r1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

SUBMODULE divide

IMPORT: r1 (RealNumber), r2 (RealNumber)

EXPORT: None

ALGORITHM:

Construct oldr1 using r1

r1.divide🡨r2

OUTPUT oldr1.toString, “ / “, r2.toString, “ = “, r1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

SUBMODULE add

IMPORT: c1 (ComplexNumber), c2 (ComplexNumber)

EXPORT: None

ALGORITHM:

Construct oldc1 using c1

c1.add🡨c2

OUTPUT oldc1.toString, “ + “, c2.toString, “ = “, c1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

SUBMODULE subtract

IMPORT: c1 (ComplexNumber), c2 (ComplexNumber)

EXPORT: None

ALGORITHM:

Construct oldc1 using c1

c1.subtract🡨c2

OUTPUT oldc1.toString, “ - “, c2.toString, “ = “, c1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

SUBMODULE multiply

IMPORT: c1 (ComplexNumber), c2 (ComplexNumber)

EXPORT: None

ALGORITHM:

Construct oldc1 using c1

c1.multiply🡨c2

OUTPUT oldc1.toString, “ x “, c2.toString, “ = “, c1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

SUBMODULE divide

IMPORT: c1 (ComplexNumber), c2 (ComplexNumber)

EXPORT: None

ALGORITHM:

Construct oldc1 using c1

c1.divide🡨c2

OUTPUT oldc1.toString, “ / “, c2.toString, “ = “, c1.toString

OUTPUT STATEMENT “Please enter new choice”

CALL Menu.displayChoice

**Java Code**

public class Calculation

{

public static void main(String args [])

{

}

public static void add(RealNumber r1,RealNumber r2)

{

RealNumber oldr1=new RealNumber(r1);

r1.add(r2);

System.out.println(oldr1.toString() + " + " + r2.toString() + " = " + r1.toString());

System.out.println("Please enter new choice");

Menu.displayChoice();

}

public static void subtract(RealNumber r1,RealNumber r2)

{

RealNumber oldr1=new RealNumber(r1);

r1.subtract(r2);

System.out.println(oldr1.toString() + " - " + r2.toString() + " = " + r1.toString());

System.out.println("Please enter new choice");

Menu.displayChoice();

}

public static void multiply(RealNumber r1,RealNumber r2)

{

RealNumber oldr1=new RealNumber(r1);

r1.multiply(r2);

System.out.println(oldr1.toString() + " x " + r2.toString() + " = " + r1.toString());

System.out.println("Please enter new choice");

Menu.displayChoice();

}

public static void divide(RealNumber r1,RealNumber r2)

{

RealNumber oldr1=new RealNumber(r1);

r1.divide(r2);

System.out.println(oldr1.toString() + " / " + r2.toString() + " = " + r1.toString());

System.out.println("Please enter new choice");

Menu.displayChoice();

}

public static void add(ComplexNumber c1,ComplexNumber c2)

{

ComplexNumber oldc1=new ComplexNumber(c1);

c1.add(c2);

System.out.println(oldc1.toString() + " + " + c2.toString() + " = " + c1.toString());

System.out.println("Please enter new choice");

Menu.displayChoice();

}

public static void subtract(ComplexNumber c1,ComplexNumber c2)

{

ComplexNumber oldc1=new ComplexNumber(c1);

c1.subtract(c2);

System.out.println(oldc1.toString() + " - " + c2.toString() + " = " + c1.toString());

System.out.println("Please enter new choice");

Menu.displayChoice();

}

public static void multiply(ComplexNumber c1,ComplexNumber c2)

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System.out.println("Please enter new choice");

Menu.displayChoice();

}

}